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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,023	01/08/2002	Willys Choi	67,200-616	6137

7590 07/16/2004

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EXAMINER	
PHAM, HOA Q	
ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/043,023	CHOI, WILLYS	
	Examiner	Art Unit	
	Hoa Q. Pham	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,15-27 and 29-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,15-27 and 29-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-13, 15-27, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urayama et al (JP-40-5217881 A) in view of Fitzsimmons et al (6,493,078) and Nakano et al (6,613,588).

Regarding claims 1, 14-16, 17, and 29-30; Urayama et al discloses a resist coater with an evaluation unit for detecting dust quantity of resist film on the wafer which has all the features of the present invention except that the coater cup is comprises a transparent material; however, such a feature is known in the art, for example, as taught by Fitzsimmons et al. Fitzsimmon et al, from the same field of the endeavor, teaches that the a part of the coater bowl (105) is made of transparent material (transparent window)(120,220,32) so that the detector (131) is located outside of the chamber for monitoring the substrate (115) (figures 2, 3, 5, 6, 9 and column 4, lines 29-31 and column 6, lines 40-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Urayama et al by using a transparent material for the coater bowl as taught by Fitzsimmons et al so that the light source and the detector are located outside of the coater. The rationale for this modification would have arisen from the fact that by using a transparent material or

window for the coater and positioning the detector and light source outside of the coater would prevent the damages of the light source and detector due to the heat, dirt and moisture inside the coater.

Urayama et al does not teach that the coating device is automatically terminated when the amount of the dust is exceeded a predetermined level. However, such a feature is known in the art as taught by Nakano et al. Nakano et al teaches that the plasma processing device with a particle detection optical system in which the etching operation can be halted if the total number of particles generated exceeds a reference value (column 9, lines 21-27 and column 18, lines 44-52). It would have been obvious to one having ordinary skill in the art to include in Urayama et al a terminating system as taught by Nakano et al. The rationale for this modification would have arisen from the fact that using such system would alert the operator know when the processing chamber need to be cleaned or maintenance.

Regarding claim 3, the laser source is attached to the coater cup (see figure 1).

Regarding claims 4 and 18, see Urayama's abstract for resist coater.

Regarding claims 2, 5-7,12-13, 19-21, 26-27, see Urayama's abstract for a laser source (10) and a laser detector (11). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an edge emitting laser or a solid-state semiconductor light emitter because they would function in the same manner. A substitution one for another is generally recognized as being within the level of ordinary skill in the art.

Regarding claims 8 and 22, see figure 1 of Urayama for spindle (15).

Regarding claims 9 and 23, see Urayama's abstract for detecting dust.

Regarding claims 10, 11, and 24-25, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the particle detection system of Urayama et al for detecting the photoresist dust as a result of a wafer spin coating operation because the device would function in the same manner.

Regarding claims 31 and 32, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include in Urayama one or more additional coater bowl if addition inspection is desired.

Response to Arguments

3. Applicant's arguments filed 5/17/04 have been fully considered but they are not persuasive.

a. The Declaration filed on 5/17/04 under 37 CFR 1.131 has been considered but is ineffective to overcome the Fitzsimmons et al reference.

The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Fitzsimmons et al reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897)**. With respect to the present invention, the exhibit A is not found**

as mentioned by the applicant in the declaration. Thus, the declaration is not considered to be sufficient.

b. Applicant's remarks, page 8-9, argue that because the present application filed on January 8, 2002 and Fitzsimmons et al reference issued on December 10, 2002 based on an application filed on September 19, 2001; thus, Fitzsimmons et al was not publicly available as a prior art reference with respect to 35 U.S.C 103 (a) until December 10, 2002. The argument is not deemed to be persuasive because the argument is not based on any source. Applicant is preferred to MPEP 706.02 for the distinction between 35 U.S.C 102 and 103, claims may be rejected under 35 U.S.C 102(e). 35 U.S.C 102(e) may be applied if Fitzsimmons et al teaches every aspect of the claimed invention; in this case, a rejection based on 35 U.S.C 103 is applied because the reference teachings must somehow be modified in order to meet the claims.

In view of the foregoing, it is believed that the rejection under 35 U.S.C 103(a) is proper.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (571) 272-2426. The examiner can normally be reached on 7:30AM to 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hoa Q. Pham
Primary Examiner
Art Unit 2877

HP
July 13, 2004